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## Themira nigricornis Meigen in North America, With a Revised Key to the Nearctic Species of Themira (Diptera: Sepsidae)

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Among material kindly submitted for determination by G. C. Crampton were three male specimens of a species of *Themira* different from any known to occur in North America. Consultation of the Duda monograph<sup>1</sup> showed that the specimens, captured in Cambridge, Mass., on April 24, May 16, and May 18 respectively, 1940, were *Themira nigricornis* Meigen, a species which belies its name in having antennae less black than its nearest relative, *T. putris*. Professor Crampton has graciously allowed the writer to retain the specimens in his collection.

In order to show the relationships of *T. nigricornis*, as well as those of two species described by Curran, the following key is offered. The genus is apparently restricted to the Holarctic region.

### Key to the American Species of *Themira*

1. Sternopleura largely or wholly polished.....2  
Sternopleura entirely whitish pruinose.....5
2. Males; fourth sternite with lateral tufts of long hair; fore legs greatly deformed (male of *T. notmani* unknown)...3  
Females (female of *T. maculitarsis* unknown).....4

<sup>1</sup>Duda, O., 1926, Monographie der Sepsiden, Ann. naturhist. Mus. Wien, 39: 1-153, 1 folding chart, pls. 1-7; 40: 1-110, pls. 1-9. Malloch (1928, Proc. Linn. Soc. New South Wales, 53: 611) has shown that although the first part of the Duda work (palaeartic and nearctic regions) bears the date December, 1925, it did not appear until January 16, 1926; the second part appeared on December 10, 1926.

JUN 24 '46

3. Middle tarsi yellowish; fore basitarsus as long as the two following joints together, the second joint articulating at one-fourth from the tip of the basitarsus (Hudson Bay—1917, Wash. Agric. Expt. Sta. Bull. 143: 46)  
 ♂ *T. malformans* Melander and Spuler  
 Middle tarsi with each joint whitish basally, black apically; fore basitarsus slightly longer than the second joint, which articulates at the middle of the basitarsus (Birtle, Manitoba—1929, Amer. Mus. Novitates No. 339:10)  
 ♂ *T. maculitarsis* Curran
4. Legs mostly reddish; fore femora without bristles below (Grant Mt., Essex Co., N. Y., running with ants—1927, Amer. Mus. Novitates No. 275: 2) . . ♀ *T. notmani* Curran  
 Legs black; fore femora on under side with two approximate spines. . . . . ♀ *T. malformans* Melander and Spuler
5. Small species 2–3 mm. in length; anterior notopleural bristle not half as long as posterior. . . . . 6  
 Larger species 4–5 mm. in length; anterior notopleural bristle over half as long as posterior. . . . . 8
6. Fore coxae yellow; male fore femora nearly straight, only slightly sinuate on upper side; female fore femora with two or three small stout bristles on middle of under side (N. Y., Conn., Pa., Ill. [types]; Mich.—1917, Wash. Agric. Expt. Sta. Bull. 143: 46)  
*T. flavicoxa* Melander and Spuler  
 Fore coxae dark brown to blackish; male fore femora strongly deformed, strongly sinuate on upper side, with a long bristle at base of under side; female fore femora without bristles near middle beneath, with but one, or with four or five. . . . . 7
7. Male middle tarsi with last three joints cordate, wider than long; female fore femora on under side without or with but one small bristle near middle (Wash., Ore., Mont., Vt., Pa., [types]; N. Y. (Leonard)—1917, Wash. Agric. Expt. Sta. Bull. 143: 45, fig. 23 [on pl. opp. p. 80])  
*T. latitarsata* Melander and Spuler  
 Male middle tarsi with last three joints not broadened, longer than wide; female fore femora with four or five small, closely spaced bristles near middle beneath (Islands of Washington Sound, Wash.—1917, Wash. Agric. Expt. Sta. Bull. 143: 44) . . . *T. incisurata* Melander and Spuler
8. Antennae wholly black; cheeks white-pruinose; mesonotum with very thin brownish pruinosity, supra-alar bristle strong; ends of third and fourth veins almost parallel; MALE: long lateral hair tufts present on fourth sternite; fore femora with backwardly bent spine in emargination;

fore tibiae with conspicuous pale lappet at middle (Europe; widespread in northern nearctic region—1761. Fauna Suecica, 2d ed.: 456: 1917. Melander and Spuler, Wash. Agric. Expt. Sta. Bull. 143: 43, f. 25 [on pl. opp. p. 80]; 1926, Duda, Ann. naturhist. Mus. Wien 39: 92, pl. 3, f. 13).....*T. putris* Linnaeus  
 Antennae reddish basally; cheeks brown, not pruinose; mesonotum with rather heavy brownish pruinosity, supra-alar bristle lacking; third and fourth veins strongly convergent; MALE: without tufts on fourth sternite; fore femora with distally inclined spine in emargination; fore tibiae without lappet (Europe; Cambridge, Mass.—1826, Syst. Besch. 5: 291; 1926, Duda, Ann. naturhist. Mus. Wien 39: 94, pl. 3, f. 14).....*T. nigricornis* Meigen

*Themira minor* is not included in the above key; lacking humeral bristles, it belongs in the genus *Enicomira* Duda, as shown in the writer's key to the American genera of Sepsidae (Pan-Pacific Ent., 19: 93, 1943). Duda has expressed the opinion that *T. incisurata* might equal *T. pusilla* Zett. and that *T. flavicoxa* might equal the poorly known *T. gracilis* Zett.

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## Some Fungus-Growing Ants Eat and Harvest Wild Fungi

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The unique agricultural habits of the fungus-growing, leaf-cutting, or "parasol" ants of the neotropics are supposed normally to trend toward one-crop farming. The pieces of leaves of plants which the larger workers are seen carrying on their backs "like parasols" are comminuted inside the nest into a substratum on which is grown in pure culture a specific symbiotic fungus which is the only food of the ants. Thus, to have these ants eating wild and uncultivated fungi, and cutting up the wild fungus, as they normally would the leaves of trees, and carrying bits of it into the nest seems a deliberate and wanton contamination of the pure culture, besides being a reversion from an agricultural stage of culture to one much more primitive in which natural growths are eaten immediately, and the incidental surplus brought into the nest.